

IN THE CLAIMS:

1. (currently amended) An ultrasonic diagnostic apparatus for transmitting ultrasonic signals from ultrasonic transducers toward a subject to be examined, and receiving reflected waves of said ultrasonic signals for display, said ultrasonic diagnostic apparatus comprising:

an analog switch for switching ultrasonic transducers for transmission of said ultrasonic signals and reception of said reflected waves;

a transmitter power source comprising a regulator circuit coupled to a power source for supplying a high voltage to a transmitter circuit for causing said ultrasonic transducers to drive said ultrasonic signals, said regulator circuit comprising a capacitor, a diode, a resistor, and an a first inductor, and a second inductor, wherein the first and second inductors are configured such that the first inductor induces a voltage in the second inductor; and

a bias power source generating circuit for generating a bias power source for said analog switch from said transmitter power source.

2. (original) The ultrasonic diagnostic apparatus of claim 1, wherein

said bias power source generating circuit comprises a positive bias power source generating circuit for outputting a voltage value higher than a positive voltage value of said transmitter power source, and a negative bias power source generating circuit for outputting a voltage lower than a negative voltage value of said transmitter power source.

3. (original) The ultrasonic diagnostic apparatus of claim 1, wherein

a circuit for generating said bias power source from said transmitter power source is a charge pump.

4. (original) The ultrasonic diagnostic apparatus of claim 1, wherein

said apparatus is a transmission voltage control circuit for variably controlling the voltage value of said transmitter power source.

5. (previously presented) The ultrasonic diagnostic apparatus of claim 3, wherein

a driving circuit for said charge pump shares a driving circuit in said transmitter power source.

6. (original) The ultrasonic diagnostic apparatus of claim 1, wherein

said transmitter power source comprises a stabilizing power source circuit for decreasing and stabilizing the positive voltage value supplied to said transmitter circuit, and a stabilizing power source circuit for increasing and stabilizing the negative voltage value supplied to said transmitter circuit.

7. (previously presented) The ultrasonic diagnostic apparatus of claim 1 further comprising a voltage drop circuit coupled to said transmitter power source.

8. (previously presented) The ultrasonic diagnostic apparatus of claim 7 wherein said voltage drop circuit further comprises a transistor and a feedback circuit.

9. (previously presented) The ultrasonic diagnostic apparatus of claim 8 wherein said feedback circuit controls said transistor using a reference voltage.

10. (previously presented) The ultrasonic diagnostic apparatus of claim 1 further comprising a filter circuit for facilitating removing noise from said transmitter circuit voltage.

11. (previously presented) The ultrasonic diagnostic apparatus of claim 10 wherein said filter circuit further comprises an inductor and a capacitor.

12. (previously presented) The ultrasonic diagnostic apparatus of claim 1 wherein said transmitter power source further comprises a positive transmission voltage source and a negative transmission voltage source.

13. (previously presented) The ultrasonic diagnostic apparatus of claim 12 further comprising at least one charge pump circuit coupled to said at least one positive transmission voltage source for generating at least one positive bias voltage having a higher value than a positive transmission voltage.

14. (previously presented) The ultrasonic diagnostic apparatus of claim 12 further comprising at least one charge pump circuit coupled to said at least one negative transmission voltage source for generating at least one negative bias voltage having a higher value than a negative transmission voltage.

15. (previously presented) The ultrasonic diagnostic apparatus of claim 2 wherein each of said positive bias power source generating circuit and said negative power generating circuit comprises at least one charge pump circuit.

16. (previously presented) The ultrasonic diagnostic apparatus of claim 3 wherein said charge pump is coupled between said regulator circuit and a transistor.

17. (previously presented) The ultrasonic diagnostic apparatus of claim 3 wherein said charge pump comprises a plurality of capacitors and a plurality of diodes.

18. (previously presented) The ultrasonic diagnostic apparatus of claim 4 wherein said transmission voltage control circuit further comprises a transistor and an integrated circuit.

19. (previously presented) The ultrasonic diagnostic apparatus of claim 4 wherein said transmission voltage control circuit further comprises a feedback circuit.

20. (previously presented) The ultrasonic diagnostic apparatus of claim 19 wherein said feedback circuit controls a transistor based on a reference voltage to facilitate controlling a transmission voltage.